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Dec. '41

The EXTENSION
ANIMAL
HUSBANDMAN



UNITED STATES DEPARTMENT
OF AGRICULTURE
WASHINGTON,
D.C.

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THE EXTENSION ANIMAL HUSBANDMAN

Issued quarterly by the Bureau of Animal Industry
and Extension Service, Cooperating.

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Serial No. 64

—December 1941

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WHAT LIES AHEAD?

There are difficulties ahead for agriculture, much more severe than we have ever dreamed before. There will be shortages that seemed highly improbable only a few weeks ago. We have been thinking in terms of how we could get the labor and materials in the quantities necessary to carry on. Now we must think about how we can get along without all the labor and materials we formerly thought necessary.

This throws a great responsibility upon all of the workers in agriculture - in national, State and county office. * * * - but there are favorable points to remember. We have the greatest reserve of foods, feeds, and fibers that this country has ever possessed in peace or war. We have the best organization this nation has ever had so far as agriculture is concerned. We have the greatest potential production of any nation in the world. Helping farmers to discharge the primary responsibility of American agriculture during this emergency - the production of the food and fiber needed by this country and her allies - is the job. To this task, all others must be subordinated.

Remember the parable of the talents? We will not be judged by the number of talents we have, but how we use them. We have the responsibility. We have the talents. We must get the job done.

---Claude R. Wickard, Secretary of Agriculture

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TO EXTENSION ANIMAL HUSBANDMEN

American agriculture has never failed its people, and it will not today. Down through the years since this country became a nation, there has never been a famine from lack of production, or anything that approached one. There has always been plenty of food in America. ***

Since the last war, agriculture has come into the front rank and has taken its necessary post in our national make-up. This place for agriculture was the philosophy which guided the beginnings of the Department of Agriculture, and which grew into our national farm programs. Through our farm programs we have built up a great democratic system through which our farmers can turn quickly and effectively to the tasks the war requires of them.

Planes and tanks and guns are moving from our production lines. Food must continue to move from our production lines as well. America has become the food arsenal of the world. *** It is a tremendous job, but we are capable and ready, and we will get the job done. *** You people in animal husbandry work can well be said to be engaged in the most important endeavor of any agricultural group now in existence. My felicitations to you for a continuation of your efforts in building a stronger, more virile and happier people. --Excerpts from the talk of Grover B. Hill, Assistant Secretary of Agriculture, at Chicago, Nov 28, 1941

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"FOOD FOR DEFENSE" FROM THE LIVESTOCK FRONT

(The following reports from several key States high-light the Food-for-Defense programs now under way in such States and contain many ideas of wider application.)

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CALIFORNIA -

At the present time in California we are making a special effort to focus the attention of livestock producers, particularly beef cattle operators, on what we term, "A Nine-Point Livestock Program." We believe that promotion of this program will not only materially aid in the present emergency but is sound procedure for the uncertain times that are ahead.

This nine-point program has been prepared in mimeographed form and given wide distribution throughout the State. The response has been very favorable from farm advisors, producer organization leaders, representatives of action agencies, credit organizations, and individual producers. The introductory statements to the program outline are as follows:

"Proper and plentiful food has been declared a primary essential to the successful defense of democracy, and concentrated animal proteins and fats have been designated essential foods for the defenders.

"Livestock prices are now favorable for operators to realize profit even under existing high production costs. The time is almost certain to come when favorable prices in relation to costs will fade and chances for profit dwindle even for the efficient operator. Therefore in this emergency livestock producers have a definite responsibility and unusual opportunity to simultaneously aid in the Food-for-Defense program and better protect their own economic interests for the lean years of the future. Through the application of the nine-point program the annual production rate for beef, pork, lamb, mutton, and wool can be materially increased, and operators lower their unit costs of production and their financial risks."

The nine points of the program are:

1. Put into operation a selective breeding program.
2. Follow a systematic culling program to remove inferior and aged animals
3. Maintain breeding stock on normal plane of nutrition and provide necessary feed for continuous gain of young growing animals.

4. Make maximum use of pasture crops.
5. Conserve resources on both cultivated and range lands.
6. Watch cost of gains in the feed lot.
7. Guard the health of animals.
8. Employ sound marketing practices.
9. Observe fundamental rules of general management.

Each of the nine points is discussed in detail in the program outline so as to enhance its practical value and use. Copies of the complete program will be furnished on request. —Louis H. Rochford, Extension Specialist in Animal Husbandry, University of California, Berkeley.

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GEORGIA -

Shortly after the food-for-defense program was announced by Secretary Wickard, district, county and community meetings were held. All of these meetings dealt with the national problems we were, and now are facing. The needs for better diets and the foods that have these essentials were discussed at length with the farm people who made up the community group. In addition, newspapers were very glad to carry articles that urged increased production for national defense and for more profit.

The announcement on hog price support stimulated interest in hog production to the extent that all the county agents had to do, in many instances was to suggest better feeding, breeding, and management practices, and the producer followed the instructions.

We consider swine sanitation one of our most important problems and much progress is being made in that field by not talking swine sanitation as such, but by stressing the importance of year-round grazing crops, clean water supply, etc. We are working with the purebred hog breeder to some extent, but are stressing the importance of the use of good boars on our crossbred and native sows.

Our 4-H Club boys and girls are urged to use the scraps from the kitchen, such as surplus vegetables, etc., in producing more meat for home consumption and to increase the national meat supply. Some counties have campaigns for "an extra pig per family" or a "pig for defense." When these projects are approached from the patriotic standpoint, as well as individual profit, much more momentum is developed in a short time. When the pigs are ready to slaughter, some are used in butchering, cutting, curing and canning demonstrations. Utilization of by-products is stressed, because this sometimes means the difference between profit or loss on the animal butchered for use on the farm.

Our farmers were urged to breed more sows and gilts for 1941 fall litters. This met with the approval of a large number and as a

result, a larger pig crop was expected this fall. Many farmers are breeding more gilts for spring farrow and it is very likely that we will have a bumper crop in the spring of 1942. Georgia was called on for a 5 percent increase in hogs and it is believed this goal will be easily reached. Management, better feeding, and seasonal breeding have increased some producers' output as much as 30 to 50 percent. It seems certain therefore that with the assurance of price support in 1942, Georgia farmers will easily reach the goal, assuming that our feed crops yield at a normal rate.

At present we are stressing the importance of planning for the 1942 hog crop by planning the feed crops to be used. The man who plans his work well invariably does a better job than the man who never plans. We are trying to get them to plan their work thoroughly and then thoroughly work the plan.

In the near future we are planning to launch an extensive campaign to get farmers to use better boars on their crossbred, grade and native sows. -- W. E. Pace, Jr., Extension Swine Specialist, Georgia Extension Service, Tifton.

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IDAHO -

Idaho stockmen are called upon to: (1) Maintain sheep numbers at present levels, (2) increase cattle marketing by 20 percent, (3) increase swine production by 15 percent.

As a part of the defense committee work the assignment of publicity, information, and field work in putting the program into effect was assigned to the Extension Service. This involves contact with 25,114 swine producing farms, 6,996 sheep ranches and farms, and 5,373 cattle ranches. It involves a plan of work for 2,000,000 sheep, half a million cattle, and half a million hogs. Fortunately, the assignment was made during the time the breeding herds for 1942 were being sorted.

As sheep numbers were to remain stationary, with marketing to be slightly reduced, it was evident that the sheepmen had anticipated the situation and acted accordingly. More whitefaced rams are in service than usual. This is for the purpose of producing whitefaced-ewe lambs for replacement breeding purposes, hence the number to be shipped as fat and feeder lambs should be reduced in accordance with the recommended proportion.

A somewhat different problem confronts the cattlemen. Idaho cattle numbers have been increasing by the entrance into the cattle business of grain farmers who now have part of their land in soil conserving crops. As all ranges are fully stocked, range cattle numbers remain fairly stationary in keeping with the carrying capacity of the spring and summer range. However, many farmers have

gone into the cow business with an increase of 36 percent in the number of cattle ranches in the State the past decade. The increase is not in numbers of range cattle outfits but of the establishment of beef herds on soil conserving pastures and feeds, and on grain and general crop farms.

The range outfits have shown ready cooperation in the plans to reduce their herds. The more inferior animals now command good prices creating an excellent opportunity for culling. Calves bring as much per head as the usual average price of yearlings and often two-year-olds. Many of the cattle outfits have disposed of all but the best breeding stock. Large numbers of the cattle sold by the cattle outfits are in the hands of feeders and will be finished and marketed in 1942 but part of the heifers are being held as foundation cattle on farms with a surplus of pasture and feed.

Response to the request to reduce cattle numbers has generally been satisfactory. This program is being conducted by:

- (1) Explanation of the 1942 plan at the October meeting of the Idaho Cattle Association
- (2) Publication of the plan with suggestions for the successful completion in the Idaho Cattleman and a special printed extension circular distributed to all cattlemen.
- (3) Explanation of the program at all the State and county defense meetings.
- (4) Making it a part of the general livestock plan of work by the county agricultural agents.

In a majority of the swine growing counties the growers are well organized into strong marketing associations. By this means close contact can be kept with the producers. At the time the instructions were received the recommended increase could come only by holding back sows and gilts for spring litters. Results are indicated by reports from ten of the best associations of the State. These show a reduction in the number of sows marketed. In the recent report of 118 cars from 10 counties, only 36 out of 1,000 hogs marketed were sows, and the report indicates that most of these were aged, heavy sows unfit for further breeding service. --E. F. Rinehart, Extension Animal Husbandman, Idaho Extension Service, Boise.

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ILLINOIS -

The last week in November, 1940, the Illinois livestock extension specialists suggested to farmers that it was time to increase pork production. This was emphasized at the outlook conferences held that week in all parts of the State. The reason given then was the prospective decline in hog numbers at a time when

consumer demand was increasing. By January, hog prices were advancing rapidly and more farmers bred more sows. The result was an evident increase in numbers of late spring and summer litters. A survey in Bureau County last February showed 4 percent more sows bred than the previous winter.

On April 4 the program for Government support to heavy-hog prices was announced to a crowd of 1,270 swine raisers assembled at the University for the annual swine day program. On April 23 all the Illinois county agents assembled at the University for an emergency food-for-defense meeting. As part of the full-day program the writer urged increased pork production because it would be patriotic and also profitable. Feeding fall pigs to heavier weights, pushing early spring pigs, and breeding more sows and gilts as soon as possible were suggested practices.

The county agents were given an outline of University of Illinois Food-for-Defense suggestions. This was followed by continued publicity, which covered key methods of producing more pork quickly. In most counties all of this material was published in the papers and in some cases also mailed to the farm bureau members.

Of course most of the increased pork production was secured through larger numbers of fall pigs. Some of the largest producers in the State increased their numbers of pigs this year by 20 to 30 percent, including a 50 percent increase in fall pigs.

At the fall conference of county agents, "Produce More Pork for Income and Defense" headed the list of extension projects proposed for 1942. All of the county livestock tours in 1941 have featured hog production; the winter county livestock meeting will emphasize it; the high school agriculture teachers are cooperating; and the 1942 county livestock tours are scheduled to high light the demonstrations of pork production. --E. T. Robbins, Livestock Extension Specialist, University of Illinois, Urbana.

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IOWA -

Iowa is expected to increase her swine production in the spring of 1942 by 16 percent over the 1941 production. This means approximately 2,000,000 head, making an expected total for the spring of 1942 of approximately 13,000,000 head.

During the spring of 1941, the animal husbandry extension specialists decided that with swine in such a favorable economic position, the fall of 1941 and the winter of 1941 and 1942 would afford an opportunity for an intensive as well as extensive program along the lines of efficient pork production. Through the farm bureaus in cooperation with the county agents, a swine raisers' meeting was scheduled for every county of the State, these meetings to start September 12 and be concluded by November 1, 1941.

The cooperation of the defense councils was solicited as well as that of all other Government agencies in the county. In a majority of the meetings, the chairman of the defense council made a statement relative to the increase in swine expected. He was followed by the extension specialist who not only put in a plug for increased pork production, but also stressed the importance of those factors which would contribute to greater efficiency. These meetings were all held, but two, by the first of November with an average attendance of 60.

As a follow-up in the counties, many of them appointed a county swine committee of three to assist the county agent in conducting the swine program and in arranging for follow-up meetings. It was a part of the plan that a meeting be held in every township some time during the fall and winter which would stress the need of more hogs, and some of the more important points dealing with production.

In order that the people attending these meetings would have something to take home with them, 65,000 copies of a small leaflet were printed dealing with "Swine Producers and National Defense." These leaflets carried in concise form many of the recommendations made at the meeting relative to rations and management.

A second series of meetings is planned for this winter reaching practically every one of Iowa's 100 counties. These meetings are to be held in cooperation with the veterinary specialists.

At present, it would appear that Iowa would have even a larger increase in hogs than the 16 percent. If so, the problem of raising these pigs and keeping them thrifty will not be any easier. If we should have a wet cold spring with such a large congestion of pigs on farms during the spring months, we feel that our farmers are going to need the very best veterinary counsel and for that reason, these meetings involving both the animal husbandman and the veterinarian have been arranged.

Next summer, field meetings will be held in several of the counties on farms where good results are being obtained through following approved practices. —E. L. Quaife, Extension Associate Professor, Animal Husbandry, Iowa State College, Ames.

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MINNESOTA -

A farm production campaign for 1942 has been in progress in Minnesota since last spring. In April a news story was sent to county agents, country press, and radio stations regarding the breeding of more sows for fall litters. This was followed up with articles on: Pasture for hogs, creep feeding pigs, feed hogs to heavier weights, full feed for low cost, vaccinate for cholera while pigs are small, hogs a good market for surplus feed, protein supplements, lower costs, and select good sires.

In September ten regional Defense Board meetings covering the entire State were conducted. At these meetings all AAA committeemen, county agents, Farm Security, Production Credit, REA, and other Government agents were contacted. The dairy, poultry, and livestock specialists attended these meetings. How the Minnesota swine raiser can reach the production goals was discussed by the specialist. A two-page outline was given each person present. This outline has been mimeographed by the AAA committees in most of the counties and given to all farmers when they were contacted for their 1942 intentions of production.

Beginning November 10, 1941 special swine meetings were begun in counties to train local leaders in Food-for-Defense. Three men from each township, usually an AAA chairman, one or two good hog producers, or one adult 4-H club leader, were appointed by the county defense boards to attend these meetings. These were all-day sessions. A 5-page mimeograph outline is given each leader, together with four bulletins: Care and Feeding of Pigs; Care and Feeding of Sows; Hog Health Makes Wealth; Control of Lice and Mange. Either the chairman of the county defense board or county agent acts as chairman and emphasizes the object of the meeting and introduces the specialist. Where facilities are available, the men usually sit around tables while the specialist works at a blackboard.

In the forenoon the specialist emphasizes the importance of the Food-for-Defense program and the importance of contacting as many producers as is humanly possible. Other points stressed are the huge supplies of feed on hand, the announcement of the Secretary of Agriculture as to price support, the termination of these price supports, the place occupied by hogs in such a program, and what participation will do for the farmer.

In the afternoon, attention is given to the better practices of swine husbandry which have primary importance in meeting the goals.

The attendance runs from 85 to 100 percent of the local leaders appointed, and often others who were not invited. The leaders are 90 percent men. They are a specially selected group and rank high in their communities. Many intelligent questions are asked. These meetings are rated as among the best ever held.

Before the meeting closes, time is devoted to the procedure in giving the information to the people in the respective townships. As many as four meetings in farm homes of each township are being held. Others are held in public meeting places. There are slightly over 1,900 townships in Minnesota. It is expected that an average of two local meetings will be held per township. That means approximately 3,800 local hog meetings as a result of this program. The counties contacted earlier report good meetings and excellent response. Attendance runs from 10 to as high as 100. Each township committee makes report on the attendance.

At Waseca, on December 8, a radio was set up in a community building where the meeting was being held and time taken out to hear the President's message to Congress on the war situation. It was evident that the President's message stimulated a determined interest in the job in hand. Since that time this attitude has been noticeable in other counties. People seem more willing to make needed sacrifices. —H. G. Zavoral, Extension Animal Husbandman, University of Minnesota, St. Paul

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MISSOURI -

With every indication pointing to an increased hog production in 1942 exceeding the 16 percent suggested by the defense program, Missouri farmers can pause, draw a deep breath, and look back on a year of unusual activity in the production of pork.

Last spring (1941) the emergency hog program got under way with the holding of regional meetings at which specialists presented the following practices to agents to be passed on to hog producers:

Emergency Hog Program

1. (a) Feed hogs on hand to heavier weights
(b) Push shotes that might have been held for later feeding and marketing
2. 1941 Spring Pig Crop
 - (a) Full-feed to reach market weight as soon as possible
 - (b) Healthy, thrifty pigs
 - Treat for worms at weaning
 - Control external parasites
 - Vaccinate against cholera
 - Conserve grain by use of protein supplements and pasture
 - Substitutes for corn:
 - Rye, barley, oats, kafirs, shorts, hominy feed
 - Water
 - Minerals - especially salt
3. 1941 Fall Litters
 - (a) Select best gilts available - weighing 150 pounds and up
 - (b) Breed to good (medium-type) boar
 - (c) Feed gilts for well-developed, strong pigs
 - (d) Gilts bred April 22 will farrow August 12-15

During the succeeding months, newspaper articles, radio talks, and circular letters have kept before the hog producers of the State the principles of the program and have described ways of doing a good job in managing and feeding pork animals throughout the year.

No doubt the influence of the pork production contests sponsored by the St. Louis and Kansas City chambers of commerce in 1940

and 1941 did much to interest many Missouri producers in adopting practices which profitably fit into the demand for more pork. The contests offered prizes to producers, ranging from \$50 for the first to \$25 for twelfth place. Since there were two divisions in the west half of the State and two more in the east, a total of 48 prizes amounting to \$1,500 were available. In these contests, the prize money is paid when the winner has purchased a good boar to add to his herd, or when he has secured a good-type sow in case he already has a high-class boar.

With the knowledge that the home production and utilization of meat is important to the farm family, and to the nation a program of better butchering, cutting, and curing practices also was undertaken this past fall (1941).

Home butchering was considered important since it provides an adequate and quite satisfactory supply of meat to the farm family. It contributes to savings in food purchases. With the defense program in full swing, home butchering plays a part in relieving freight congestion.

During the first two weeks in November, all the county agents in Missouri participated in meat cutting and canning demonstrations conducted with the assistance of extension specialists. At these demonstrations one of the matters stressed was that meat carcasses furnish an excellent opportunity to point out features of desirable conformation to hog raisers, so that they may have a better idea of good types of hogs. Some features that can be explained with carcasses are: Smooth shoulders in hogs result in sides being of uniform thickness; conformation affects the proportion of sides and hams to total live weight; the proportion of lean meat to fat covering varies with the type of hog; the firmness of fat depends on the feeds used.

In the butchering phase of the demonstrations, methods of cutting the hog carcasses so as to permit a good distribution of the year's supply of products were explained. The value of having cuts of as uniform thickness as possible to permit more satisfactory curing also was brought out.

Suggestions on butchering lambs and beeves also were given.

Following these demonstrations, the agents, in turn, worked with county leaders who then assisted neighbors in their butchering work.

The emergency program set-up is being used in the ways mentioned to drive home again to farmers the fact that there is a tremendous increase in profit to those raisers who carry out a complete hog production program on their farm. --T. A. Ewing, Extension Animal Husbandman, University of Missouri, Columbia.

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MONTANA -

The extension approach to the 1942 beef-cattle program has plainly pointed out that the county goals, as assigned by the livestock specialist, were suggested, and every effort has been made to obtain the considered reaction of counties, groups, associations and individuals to such goals. Community meetings have been held by agents in every extension county (48 out of 56). State and local livestock associations have been addressed on the subject by the specialist, and the usual methods of publicity have been fully used. The State cattlemen's association has volunteered to act as the clearing house for information on the response of local groups. January first should see definite summaries of local opinion with respect to the beef goals.

Even though every possible method has been used to reach groups of stockmen to set them thinking and working out a response to the suggested beef goals, urgency in achieving these goals is totally unnecessary. It will be August of 1942, almost nine months hence, before the beginning of the marketing season arrives for more than 90 percent of Montana beef. Throughout this nine months period the necessary work and steps will be accomplished to achieve the final goal in beef that is necessary for national defense and conservative range use. It is clearly within the realm of possibility that national defense alone will be the deciding factor. As this is written on December 7, during the bombing of Pearl Harbor, the plans and programs, the goals and policies, of last September and October are of relatively small importance. Who knows but that expansion rather than contraction of beef production may be a defense necessity six months from now?

Montana can furnish a supply of beef in an emergency of one, two, or three times her goal of 18 percent of the 1940 production. It is to be had and will be marketed if the defense requirements so dictates. On the other hand, Montana alone, through its planning groups, committees, local and State livestock associations, can decide whether or not it must market more or less beef as a range conservation policy. These groups have come to have a sound, wise outlook on land use problems from the standpoint of practical application and their decision will be the best one. --E. P. Orcutt, Livestock Specialist, Montana State College, Bozeman.

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OKLAHOMA -

The Food-for-Freedom program as it applies to the production of swine is considered an excellent opportunity for the improvement of the swine program in Oklahoma.

Good management practices and disease control are essential elements in increased production of any class of livestock. The

number of pigs to be farrowed in the 1941 fall crop was already determined when we first began to work on the program. It was not possible to increase the number of pigs farrowed in 1941 but it did appear quite possible to increase the number of pigs weaned from each litter and to decrease the death rate from weaning age to market time and our program during the fall and winter months has largely been centered around these items.

Starting in January 1942, we expect to spend considerable time on a swine disease control program. In addition to news releases and radio broadcasts, we will have a series of county and local meetings in cooperation with the office of the State veterinarian. At these meetings improved management practices and prevention of disease will be discussed and demonstrated.

Four of the major causes of swine loss in Oklahoma after weaning age are cholera, pneumonia, erysipelas, and necrotic enteritis. Cholera can, of course, be almost eliminated by proper vaccination. We expect to emphasize this part of the program in certain counties in the southeastern part of the State where vaccination is not practiced regularly. The death loss resulting from pneumonia during wet weather and periods of rapidly changing temperature can largely be prevented by good management and providing warm, dry, well-ventilated sheds. We have secured good results to date with the use of sulfanilimide in the control of pneumonia. Erysipelas can be controlled by good veterinary procedure and necrotic enteritis can be largely prevented by the control of internal parasites and improved sanitary practices. We believe that by attacking these four types of diseases with information and demonstrations we can greatly reduce the death loss.

Another possibility of increasing pork tonnage, which we expect to present to farmers during the marketing season is the advisability of feeding market hogs to heavy weights where market conditions justify. In those areas of the State where an abundance of feed is available at reasonably cheap price it is probable that producers can afford to feed pigs to a weight of 250 pounds or greater, provided such weights are not discriminated against on the market at the time they are sold. This is a matter that will need to be determined by conditions prevailing on individual farms, but we feel that information presented along this line will encourage some farmers to feed to greater weights and thus increase the pork tonnage.

We have not had an active program in regard to reaching the 1942 goals for slaughter for beef cattle and veal but expect to emphasize that part of the program at regular meetings during the early spring when many of our cattle are marketed. In radio broadcasts and press releases we have emphasized the outlook reports and statistics on cattle numbers. This information is considered to be an encouragement to beef cattle men to market a part of their surplus rather than to keep an undue number of replacements. Our program in this regard will consist largely of encouraging producers to keep breeding herds only at normal numbers and not expand to meet an anticipated demand that may not develop. —F. W. Beall, Extension Animal Husbandman, Oklahoma A. & M. College, Stillwater.

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TEXAS - (Cattle) -

The beef cattlemen in Texas who have been contacted regarding the increase in tonnage of beef for 1942 over 1941, fully realize that it is an increase in slaughter rather than an increase in production that is desired by the Government. They are of the opinion that the goal requested of an 18 percent increase in 1942 over 1941 can be met by Texas producers and feeders by the following methods:

1. Save a larger percentage of the calf crop.
2. Market old, barren, and irregular producing cows.
3. Creep-feed calves from birth to weaning time. Gain can be put on during this period with less feed than during any other period of the calf's life.
4. Fatten for a longer period of time, making the carcass a little heavier.
5. Keep cattle free of internal and external parasites.
6. Handle cattle more carefully in getting them to market.
7. Be sure to keep a good supply of minerals available at all times.

The present extremely favorable situation for beef cattle producers is expected to continue through 1942. According to the Secretary of Agriculture much of the increase in beef cattle slaughter sought for 1942 should come through increased marketings stimulated by attractive prices.

In addition, the U. S. Department of Agriculture warns that without this increase in slaughtering in 1942, the continued expansion in numbers of cattle and calves will result in heavy liquidation in subsequent years when demand and price conditions may be less favorable than next year.

In order that Texas producers and farmers would fully understand what was expected of them in tonnage of beef for 1942, twelve district meetings were held. At these meetings the county agents, the AAA county committees, the vocational agriculture teachers, Farm Security supervisors and Soil Conservation Service representatives were present. Following these district meetings, county meetings were held with further explanation of what was desired. County agents then held community meetings to familiarize the people in the community with the percentage of increase desired.

No one seems to have any doubt but what Texas will meet its 1942 beef cattle marketing quota. --Geo. W. Barnes, Texas A. & M. College, College Station.

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TEXAS - (Swine) -

Texas farmers will meet and surpass the 1942 goals for hog production set for them. The State goal calls for a 17 percent increase in hog production. Texas farmers are responding to the program with the same patriotism and enthusiasm as are the soldiers, sailors, and marines now fighting for freedom in the Far East.

To initiate the program, one State meeting and 13 district meetings were held. At each of these meetings the swine specialist or some other livestock specialist discussed the goals and made suggestions as to how the goals could be attained.

Increased hog production consistent with a sound farming program was asked of all producers. Most county land-use-planning committees in our State have recommended an increase in hog production for home use and a surplus to sell even under normal conditions.

Available figures indicate that the fall 1941 pig crop will be about 15 percent larger than the 1941 spring farrowing. The goal set for the 1942 spring farrowing is 17 percent or more over the 1941 spring farrowing.

The following production recommendations were presented and discussed:

- Save a high percentage of the 1941 fall-farrowed pigs by giving them proper care and by good feeding.
- Full feed the 1941 fall-farrowed pigs on a good balanced ration for economical gains and to get them off to market by the time the spring pigs are farrowed.
- Breed all available gilts and sows for spring farrowing.
- Provide adequate equipment and pastures for the spring farrowed pigs.
- Feed pregnant sows on good balanced rations so as to develop large litters of strong pigs.
- Full feed 1942 spring farrowed pigs on good balanced rations so they will reach market in September when prices are usually the highest.
- Rebreed sows so that they will farrow again in the fall of 1942.

The district meetings were immediately followed by approximately 1,000 county and community meetings. The information presented at the district meetings was relayed to local farmers and usually resulted in enthusiastic discussion. Numerous news stories were published in State and county newspapers.

Thus the program was initiated. The response coming from county agents is excellent and most of them are working day and night to stimulate production. The flood of mail direct from farmers has stepped up to a point where the inquiries can hardly be handled. The call for bulletins on production has increased noticeably and inquiries as to where breeding stock can be obtained are very numerous. The demand for boars has been especially good.

4-H club boys are doing their part equally as well as adult farmers. Over 800 registered sow pigs and 108 registered boars have been purchased by 4-H club boys in 1941. Most of these gilts will farrow in March and their litters will be fed out in commercial pork production.

Grain feed especially grain sorghum is cheap and plentiful in the western half of this State. We also had a bumper crop of barley. Hog production is expanding more rapidly in the West than in the East because of the large amount of feed available. In the east, where corn is the principal grain feed, the yields of grain feed were below normal and this factor will retard expansion to some extent. Farmers, however, are making every possible effort to expand hog production and present indications are that the goals will be exceeded everywhere. --E. M. Regenbrecht, Extension Swine Husbandman, Texas A. & M. College, College Station.

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ANIMAL PRODUCTION SOCIETY MEETING

The 34th annual meeting of the American Society of Animal Production held in Chicago, November 28-30, enjoyed a record attendance and an excellent program. R. M. Bethke of Ohio was elected president for the ensuing year, with A. D. Weber of Kansas continuing as secretary-treasurer. L. A. Maynard of New York was elected vice-president.

The "Society" will publish the first issue of its quarterly publication, "The Journal of Animal Science," under a February, 1942, date line.

The extension section of the meeting was attended by more than 60 persons from all sections of the country for a splendid program headed by the Assistant Secretary of Agriculture, Grover B. Hill. This section's officers for the coming year will be W. W. Derrick of Nebraska, chairman; H. G. Zavoral of Minnesota, secretary; and Grady Sellards of Kentucky, vice-chairman.

All extension workers in animal husbandry should affiliate themselves with this organization and be on the lookout for the new journal which will be its house organ.

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FITTING LIVESTOCK INTO THE FAMILY FOOD SUPPLY PROGRAM

By K. F. Warner, U.S.D.A., before the extension section of
the American Society of Animal Production,
November 28, 1941.

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I want to say just four things on the topic of fitting livestock into the family food supply program.

First, it takes a lot of food to supply a family during twelve months. Second, that pile of food must include a great variety of product. Third, if many farm families are to have an adequate quantity and variety of food they will have to grow much of it themselves. Fourth, livestock is an essential part of any food supply program as well as being the basis for a sound diversified agricultural defense.

Did you ever see the amount of food needed to supply a family of five put up in a single pile? It is a rather breathtaking sight. Even a child of five need around 1,300 pounds of food during the twelve months, including milk. Father and the hard working boys will consume almost a ton each. The total yearly needs for that family of five will weigh over 8,000 pounds. Careful planning and conscientious effort are needed if this great supply of edibles is to be available when the family needs it.

"Variety is the spice of life" so said a philosopher. Variety in diet is also the spice of health. Each particular food is rich in certain food elements, but most foods are lacking in some of the values that the human body needs. The careful planning of our daily and weekly diet on the basis of the nutritive values of the respective foods is the most effective way to insure nutritional health for the family. The shotgun recipe for a balanced diet, however, is to provide a variety of foods. We all enjoy variety at the dinner table. The same food day after day becomes monotonous and distasteful. That is the way in which Mother Nature spurs us on to seek and use the variety of foods we need. A food supply does not consist of fruits, or vegetables, or meats, or poultry, or dairy products, or fish, alone. It consists of all of them.

The following estimate of the yearly food needs for a family of five worked out by the U.S.D.A. Bureau of Home Economics gives a clear picture of the quantity and variety of foods needed if the family is to maintain itself on even a moderately adequate basis:

| | |
|------------------------------------|--------------|
| Milk | 1,525 quarts |
| Butter | 125 lbs. |
| Other fats | 175 " |
| Lean meat, poultry, and fish | 675 " |
| Eggs | 125 dozen |
| Dried beans, etc. | 65 lbs. |
| Tomatoes and citrus fruits | 500 " |
| Green or yellow vegetables | 800 " |
| Potatoes | 800 " |
| Flour and cereals..... | 1,000 " |
| Other vegetables and fruits | 1,000 " |
| Sugar | 300 |

If many farm families are to have these necessary quantities and varieties of food, they will have to grow a lot of it themselves. Cash incomes will rise and fall through the years as does also the cost of farm operations and purchasing power of the dollar. The history of farm families has been that cash income is rarely adequate to purchase all the things the family really ought to have. One of the advantages of living on a farm is to reduce the need for cash by producing many of the things the family needs at home. Whatever the market price of a pound of meat or a bushel of potatoes or a quart of milk, there is the same nutritional value in these products. A store of home-preserved food is a savings account on which the interest rate is never lowered.

Farm families who operate on a strictly cash income basis selling what they produce and buying back all the things they need industrialize their operations and make wage hands of themselves. Victims of unpredictable price changes, they expose the family to the full fury of every economic storm that blows. Hard times will always be tough times for every group of farmers no matter how they operate, but those with home-grown food can have nutritional health, come boom or depression.

A mortgage that a farmer gives to a credit company for a loan is commonly called a first mortgage. It really isn't. The first lien on the family income is for food to feed the family. The second lien is for housing, clothing, and other family supplies. The third lien is for operating expenses such as labor, twine, and threshing bills. Government takes the fourth cut in taxes. Interest on the so-called first mortgage is the fifth lien on income, with repairs for fences, machinery, buildings, etc., sixth. Curtailment of the loan is a poor seventh, and improvements to the place and profits are a dust-covered eighth and ninth.

If a farm family hopes to maintain itself, to protect its income so that the fourth mortgage on income can be used for taxes and the fifth for interest on the loan, it is most important that it use every means possible to liquidate the prior liens for food and shelter

and operations. Nothing is unchangeable but change. Nothing is permanent but impermanence. Nothing is certain but uncertainty. In such a situation there could be no sounder strategic defense of the family possessions than for it to protect its essential needs with its own hands so that national and world conditions beyond the family's control will not leave it stranded and destitute in spite of its honest, efficient effort. Food is first, and farm families have the land, labor, and equipment to feed themselves.

Livestock is an essential part of any food supply program. If 675 pounds of meat are needed as part of a moderately adequate yearly diet, plans must be made for producing, feeding, and preserving a couple of husky calves or a fat yearling, two or three hogs, perhaps a lamb or two, and some chickens. If there are to be calves, there must also be cows. This makes possible the production of the dairy products needed and with the garden, orchard, and berry patch rounds out the home production of protective foods. Such a farming system requires some buildings, some equipment, and a large amount of chores. There are those who say that this is an age of specialization--that a farm family should discover its most profitable crop and then spend full time producing it, buying most of its needs at the retail store. Perhaps there are some such situations, but my observations would indicate that they are very few. The produce from the cow, sow, and hen are just as essential by-products of normal farming as are hides, bone meal, and soap, the by-products of the packing industry.

The principal business of the meat packing industry is to sell meat, yet the success of that business has depended on its utilization of by-products. It seems just as reasonable to expect farming to be successful with a man spending all his time on the seat of a tractor as it would be for a packer to expect to compete successfully if he spent all his time merely dressing and selling beef.

We believe thoroughly in the value of diversified farming. It makes for a sounder, more elastic, more easily defended business. Feed production with forage, pasture, and silage, are an essential part of such diversification. In turn, livestock is necessary if full value is to be obtained from these home-grown feeds. It may not always be necessary or even desirable to make these livestock operations extensive or to include every class of animal on every farm. But I can think of no better defense against the future than for a family to make full use of its labor and equipment at chore time.

Fitting livestock into a food supply program is an effective way to keep both the farm and farmers fit.

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I find the great thing in this world is not so much where we stand, as in what direction we are moving. --Oliver Wendell Holmes

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THE USE OF VISUAL AIDS IN ANIMAL HUSBANDRY EXTENSION

By L. K. Bear, Extension Specialist in Animal Husbandry,
Ohio State University, Columbus.

From time to time we have considered new programs and newer developments of old programs. Just now we have Food For Defense. Not so long ago extension work with some of our stockmen was directed toward an altogether different goal. Under both situations, changes were suggested to farmers making the extension worker's position very much like that of a salesman.

This is not new. We have suggested a change to a better sire, a change to quality roughage, a change to healthy animals and many others. If and when the farmer decides to try to make one of the suggested changes, an idea is sold.

Extension workers have used many devices to carry their information to the understanding of farmers and stockmen. Early in their experience they began supplementing the spoken and written word with devices that would attract attention and make some fact or idea readily understandable. Specimens, models, diagrams, charts and pictures are things that register through the eye and can, therefore, be classed as visual aids.

There is probably no one best visual aid. Adaptability varies with the conditions surrounding the use of the aid and the character of the subject-matter involved. Perhaps specimens should head the list of visual aids. To see or handle the genuine article is after all a very effective route to understanding. We arrange tours to take persons to the specimens when it is out of the question to present the specimen to the crowd. The early days of agricultural extension doubtless witnessed a wide use of specimens in the southern cotton fields. Perhaps we have eased up a bit since the old days on our use of this simple method.

We have a combination grain and hay rack for feeding sheep illustrated in the Ohio extension sheep bulletin. A mimeograph circular on starting lambs on feed pictures the rack. Copies were mailed to a group of beginner lamb feeders in a county of southwestern Ohio. Some of these young men looked at projected pictures (still slides) of the rack. Most of them saw the rack in a motion picture prepared by the Ohio Wool Growers' Cooperative Association, showing the device in use. They should have had an idea of what such a rack looked like and perhaps some of them could have sketched a reasonable facsimile thereof, but what about the sale? The county

agent aware of a gathering of the group arranged the delivery of dimensioned lumber from which the feeder could be assembled. A few minutes' time, a half dozen hammers and a few other tools produced the rack in the lubrication room of a filling station, a specimen that the entire group actually worked on. It went into a feedlot next day. We still have the pictures and the bulletins, and we intend to use them, but we also remember about the specimen rack. The use of a combination of aids is hard to beat.

Models are effective visual aids. They are, of course, the next best to specimens on subjects such as equipment. Models like specimens can be used to illustrate a discussion. They can be very effective as part of an exhibit to be viewed before or after a meeting or during the lunch hour. Very often models and small specimens are passed around an audience during the discussion. A close inspection is sometimes necessary for one to get the idea of just how a gadget works but it must be borne in mind that the man holding the model is temporarily removed from the listening audience. The number of articles to be passed around should, therefore, be very few.

The remainder of the visual aids that I have listed may be classed as of the graphic type. They are diagrams, charts and pictures. The proverb about the word value of a picture applies here. Simplicity should be a beneficial factor for the entire group. We have seen some fine use of charts in the news releases of the AAA. They have used boats to represent exports and milk cans for milk and the charts tell a story. Charts that present a multitude of data are confusing. Puzzles have a place but we must not trip the man we are trying to sell.

Charts have been effectively used in connection with exhibits of many kinds. This may be their most effective use for they can be tacked up for close inspection and study. Charts are, in my opinion, the least effective visual aids in general use. Often they are assembled and displayed one at a time to an audience in a room of average size. Unfortunately the same charts are frequently used in auditoriums. Not long ago a speaker displayed a series of charts in the livestock judging arena on our campus. The charts were produced from indexed negatives of the U. S. Bureau of Agricultural Economics and contained good information but less than half of the audience could read them. We should remember that many members of our audiences have been working outdoors all day before coming to our meetings. It is hard enough for them to remain alert without blacking them out of some of the most important parts of a discussion. After all, we don't flash charts of the least important items discussed.

Next among the graphic aids I will turn to diagrams. Here we have a very powerful aid. In some instances it is more effective

than a specimen. This is especially true in cases where a process is involved. Here again it is well to recognize the importance of simplicity and legibility. Mathematical diagrams and working drawings of various kinds have a value but the extension animal husbandman does not usually teach statistical methods or mechanical drawing. Charts, diagrams and posters are usually prepared by a professional.

This brings up a point which I believe is significant. Most workers can use the illustrative material prepared by themselves with best results. The aids that we construct ourselves seem to fit our needs, they are custom-made. Did you ever send to Washington for a film strip and find every one of the frames perfectly adapted to your conditions? They usually have some frames that are very satisfactory and -- one or two that you would rather not use.

The mention of films opens the subject of photography. Projected pictures, stills, movies, silent and sound, seem to have the center of the stage so far as visual education is concerned today. Satisfactory cameras are available at prices within the reach of many workers. Fresh local material can be adapted to an individual community. Ohio counties are rapidly adding this equipment to the county agent's office. We have a few local offices equipped with 35 mm silent motion picture projectors well covered with dust. Our motion picture equipment is now chiefly 16 mm and silent. A few counties have sound sets.

Projected pictures, charts, drawings and diagrams are efficient aids for the attention of the audience centered upon the subject. The miniature 2 inch by 2 inch slides are inexpensive. Today they are the most popular visual aid in use in our State. Low cost explains one reason for their wide use. Another explanation can be found in the fact that they are something our workers can make themselves.

It is only natural for an amateur photographer to make some mistakes. Donald Bennett, visual education specialist, recently added to the U.S.D.A. staff in Washington, was present at the last Ohio conference of extension workers where he commented upon the work of our amateur camera men. His most common criticism was for a fault he termed "extension disease," -- too much in the picture. We were urged to include in the picture only that part of the subject that tells the story.

Many of the principles that apply to still slides can be applied to motion pictures and professional photographers give

us plenty of close-ups. A common danger that I see in the use of projected pictures of all kinds is the temptation to try to present too much. The beauty of the color film has undoubtedly added to this danger. Progress is made by a series of advancing steps. Year-round picture records of a livestock enterprise are interesting and entertaining but we have some important seasonal phases of the business that we can best emphasize by giving them feature billing. This may help us lead farmers to make some of those short, but important, first steps.

Sound films deserve much more than passing recognition in a discussion of visual aids for they have been effectively used in many places. Our experience has been limited to the use of borrowed sound films. Films offer the advantage of complete control over the narration presented with them, which may render them more efficient when loaned.

We are seeing an increased use of visual aids in animal husbandry extension. It is my belief that available funds will, in most instances, lag behind the desire for more visual material. I feel a real need for improvement in the materials I have prepared and used. Help would certainly be appreciated. It will not benefit to be told how good they have it in another State. We have no longing for an expert photographer, unless he has an understanding of livestock and some of our extension problems. Beautiful work can be done with fine cameras provided the instrument is properly adjusted, held motionless and aimed at a well-chosen subject.

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IMPROVED REMEDY FOR SCREWORMS

The Bureau of Entomology and Plant Quarantine has developed a new remedy for both preventing and treating screwworm infestations in livestock. The remedy, known as formula or smear 62, consists of a mixture of diphenylamine, benzol, turkey red oil, and lamp black. Former screwworm remedies recommended by the Department involve the use of one material to kill the screwworm maggots and of a second to prevent reinfection. Formula 62 is relatively inexpensive, costing about \$1.50 a gallon - enough to treat 200 to 250 livestock wounds. Directions for preparing and applying it are given in a new bureau circular, E-540, A New Remedy for the Prevention and Treatment of Screwworm Infestation.

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LOW COST SHEEP DIPPING SERVICE

By H. A. Willman, Junior Livestock Specialist,
Cornell University, Ithaca, N. Y.

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Since the construction of our first portable sheep dipping equipment four years ago, much interest has developed all over the State in lice and tick control. At the present time, a dipping service is being operated in 15 counties of the State and more sheep are now being dipped each year than were dipped in several years before this sheep dipping service was established.

In a period of three weeks during the summer of 1938, about 9,000 head of sheep were dipped in a series of demonstration meetings in 5 different counties. The results of this work suggested the real possibility of getting this dipping job done at a low cost to the growers because from 400 to 600 head of sheep were dipped each day during this series of dipping demonstrations. From this early work, the per head cost of the dipping was estimated at 6 cents but since 1939 the actual cost to the grower has been slightly less than this figure.

In 1939 - 47,851 head of sheep were dipped; in 1940 - 49,327; and during 1941 - 63,830 sheep were dipped in 15 different counties.

A study of reports received during the spring of 1941 from 203 cooperators in 15 counties who had dipped their flocks at least once during the 3-year period (1938-1940) through the extension dipping service showed that:

1. Only 5 percent of the flocks had been dipped 4 times or more during the ten years prior to 1938.
2. Sixty-eight percent of the owners said that a 10-cent charge per head would not make the service prohibitive.
3. Sixty-seven percent of the cooperators reported a definite improvement in the appearance and quality of wool as a result of the dipping.
4. Forty-four percent said that their sheep sheared easier than usual.
5. Forty-three percent believed that the fleeces from dipped flocks ran heavier.
6. Thirty-three percent believed that dipping has values other than for external parasite control.

7. Among the entire group of cooperators -

17 percent dipped flocks in 1938-39-40.
23 " " " " 1938-39.
36 " " " " 1939-40.
49 " who dipped in 1940 expect to dip in 1941.
74 " " " " 1939 " " " 1941.
83 " of the cooperators who have dipped through
the service at least once since 1938, expect to
dip their flocks in 1941.

8. Eighty-seven percent of the cooperators said that they were
satisfied with the service.

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PERSONNEL NOTES

California

D. T. Batchelder, former extension specialist in animal husbandry, has been transferred to dairy extension work and was succeeded in his former position by Vard M. Shepard, a graduate of the University of Minnesota, who has had 12 years experience in teaching and marketing work in California.

Connecticut

W. B. Young, formerly part-time extension animal husbandman, University of Connecticut, is now director of the 2-year school of agriculture and short courses in the same institution.

Maryland

Joseph M. Vial, extension animal husbandman, judged baby beeves and horses at the 1941 North Carolina State Fair.

Mississippi

E. E. Grissom, assistant extension animal husbandman, has been confined to the hospital because of injuries received while judging hogs at the Mississippi State Fair.

Nebraska

Ross H. Miller, formerly part-time extension animal husbandman, University of Nebraska, is now a fieldman for the American Hereford Breeders' Association, Kansas City, Missouri.

Utah

A. C. Explin, extension sheep husbandman, received his master's degree from the Utah State Agricultural College in June.

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Other things being equal, that man will go farthest who gets
new ideas and uses them most quickly. --Liberty Hyde Bailey
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RECENT PUBLICATIONS

(This list is limited to publications of interest to extension workers. In most cases copies are available from the institution or agency issuing them. Do not write to Washington, D. C., for other than U.S.D.A. publications.)

Federal

"Report on survey of Lard Production, Distribution, and Packaging, 1938-39," by Meade T. Foster - Agricultural Marketing Service, U.S.D.A., Washington, D.C. - 31-page mimeograph, July 1941.

"Curing Home-Dressed Pork Under Refrigeration," by K. F. Warner - Bureau of Animal Industry, U.S.D.A., Washington, D. C. - 5-page mimeograph, October 1941.

"Tenderness of Beef as Affected by Aging With and Without Subsequent Freezing," by R. L. Hiner and O. G. Hankins, - Bureau of Animal Industry, U.S.D.A., Washington, D.C. - 4-page Reprint from September 1941 issue of Refrigerating Engineering.

"The Sheep Head Grub and Methods of Control," by N. G. Cobbett - Bureau of Animal Industry, U.S.D.A., Washington, D. C. - 6-page mimeograph, July 1941.

"Film Strips of the U. S. Department of Agriculture," (Price List for 1941-42) - Extension Service, U.S.D.A., Washington, D.C. - Misc. Pub. No. 458, Nov. 1941. pp. 20.

"Motion Pictures of the U. S. Department of Agriculture, 1941" - Extension Service, U.S.D.A., Washington, D.C. - Misc. Pub. No. 451, Nov. 1941, pp. 29.

"Planning and Making Color Slide Sets," by Don Bennett - Extension Service, U.S.D.A., Washington, D.C. - 10-page mimeograph 1941.

"Horse Botflies and Suggestions for Organized Control," by M. P. Jones and C. D. Lowe - Extension Service, U.S.D.A., Washington, D.C. - 8-page mimeograph, Nov. 1941.

State

"Organization and Use of Alabama Locker Plants in 1941," by W. K. McPherson - Alabama Experiment Station Special Circular, August 1941, pp. 19, tables 11.

"Livestock Shows and Fairs," by W. J. Sheely - Florida Extension Service Bulletin 110, June, 1941, pp. 25, figs. 18.

"Cattle Feeding in Southern Florida," by R. W. Kidder and W. G. Kirk - Florida Experiment Station Bulletin 360, July, 1941, pp. 23, figs. 3.

"Beef Cattle Feeding Investigations," by Z. A. Massey - Georgia Experiment Station Bulletin 211, May, 1941, pp. 19, tables 12.

"Peanut Meal in Livestock Production," by F. R. Edwards and Z. A. Massey - Georgia Experiment Station Bulletin 216, June, 1941, pp. 19, illus.

"Feeder Cattle Sales at Country Points in Illinois," by R. C. Ashby - Illinois Experiment Station Mimeograph AE-1662, July 1941, pp. 12, figs. 5.

"Retailer and Consumer Reaction to Graded and Branded Beef," by R. C. Ashby, et al - Illinois Experiment Station Bulletin 479, Aug. 1941, pp. 53, tables 23, figs. 8.

"Minerals for Livestock," - Kentucky Extension Service Circular 360, Apr. 1941, pp. 12.

"Grass Silage - How to Make It, How to Feed It, Advantages and Disadvantages in Its Use," by W. P. Garrigus - Kentucky Extension Service Circular 361, pp. 15, May 1941.

"Care and Feeding of Brood Sows," by H. G. Zavoral - Minnesota Extension Service Folder 90, June 1941.

"Straw Sheds," by S. B. Cleland - Minnesota Extension Service Bulletin 227, June 1941, pp. 7, illus.

"Controlling Bot and Warble Flies of Livestock in Missouri," by Leonard Haseman and W. E. Roland - Missouri Experiment Station Bulletin 430, July 1941, pp. 32, figs. 15.

"Estrus, Ovulation, and Related Phenomena in the Mare," by Frederick N. Andrews and Fred F. McKenzie - Missouri Experiment Station Research Bulletin 329, May 1941, pp. 117, figs. 60.

"Seasonal Calcium and Phosphorus Requirements of Range Cattle, as Shown by Blood Analyses," by J. H. Knox, et al - New Mexico Experiment Station Bulletin 282, June 1941, pp. 28, tables 8.

"Summer Fattening of Farm Flock Lambs" - North Dakota Experiment Station Bulletin 306, June 1941, pp. 11, tables 7.

"Soybeans versus Soybean Oil Meal for Fattening Calves," by Paul Gerlaugh - a short article in Ohio Experiment Station Bimonthly Bulletin No. 210, May-June, 1941.

"The Utilization of Feed as Affected by Grinding," by V. G. Heller, et al - Oklahoma Experiment Station Technical Bulletin No. 10, July 1941, pp. 9, tables 5.

"Minerals for Farm Animals," by J. R. Haag - Oregon Experiment Station Circular 136, Nov. 1940, pp. 8.

"Should Farmers Emphasize Wheat or Livestock in North Central South Dakota?" by Aaron G. Nelson and Gerald E. Korzan - South Dakota Experiment Station Circular 33, June 1941, pp. 16, figs. 7.

"Fattening Western Lambs and Gummer Ewes," by James C. Watson and Forrest U. Fenn - South Dakota Experiment Station Bulletin 354, June 1941, pp. 10, tables 6.

"Profits and Losses in Ranching, Western South Dakota, 1931-1940," by Aaron G. Nelson and Gerald E. Korzan - South Dakota Experiment Station Bulletin 352, June 1941, pp. 31, figs. 15.

"Curing Pork on the Farm," by J. C. Snow - Tennessee Extension Service Publication 173, rev. Nov. 1941, pp. 8.

"Summary of Activities in Sheep Promotional Work in 1941," by L. A. Richardson, Tennessee Extension Service Mimeograph C-9908, pp. 12.

Other

"1942 Feeding Practices" - an illustrated bulletin prepared by Education Service, National Cottonseed Products Association, Inc., 1411 Santa Fe Building, Dallas, Texas.

"Illustrated Lessons in Shorthorn Judging," - published by the American Shorthorn Breeders' Association, 7 Dexter Park Avenue, Chicago, Ill. - pp. 27.

For the sake of humanity, it is devoutly to be wished, that the manly employment of Agriculture, and the humanizing benefit of Commerce, would supersede the waste of war, and the rage of conquest; that the swords might be turned into plowshares, the spears into pruning hooks, and, as the Scriptures express it, the Nations learn war no more. --George Washington
